



November 3, 1999

99-RF-04297

Distribution  
DOE, RFFO

**MEETING NOTES FOR BUILDING 707 EXTERNAL SCOPING MEETING HELD ON  
OCTOBER 14, 1999 – TMW-007-99**

**1.0 PURPOSE OF THE MEETING:**

The meeting was held to begin the external scoping process for Building 707 Cluster Decommissioning Closure Activities

**2.0 AGENDA**

- |  |              |
|--|--------------|
| • INTRODUCTION   | TJ Wirth     |
| Meeting Purpose  |              |
| Project Purpose  |              |
| • PROJECT TEAM & ORGANIZATION                          | TJ Wirth     |
| • FACILITY BACKGROUND AND HISTORY                      | TJ Wirth     |
| List of Cluster Buildings and Anticipate Facility Type |              |
| Known or Anticipate Facility Hazards                   |              |
| • 2006 CLOSURE STRATEGY                                | TJ Wirth     |
| MISSION ACTIVITIES (Current and Ongoing)               | TJ Wirth     |
| EACTIVATION ACTIVITIES                                 | TJ Wirth     |
| • BREAK  |              |
| ECOMMISSIONING ACTIVITIES                              | Pete Sanford |
| NVIRONMENTAL RESTORATION ACTIVITIES                    | Pete Sanford |
| • PROJECT ISSUES AND UNCERTAINTIES                     | TJ Wirth     |
| • NEXT STEPS   | TJ Wirth     |

**3.0 DISCUSSION ITEMS:**

- Introductions were made and TJ Wirth addressed the purpose of the Scoping Meeting and its agenda. Copies of the handouts and a typed copy of the attendee list are attached to the administrative record copy of these minutes and are available on request. The presentation generated numerous comments and raised several issues that are summarized in Section 3.

**ADMIN RECORD**

**Kaiser-Hill Company, L.L.C.**

Courier Address: Rocky Flats Environmental Technology Site, State Hwy. 93 and Cactus, Rocky Flats, CO 80007 • 303.966.7000

Mailing Address: P.O. Box 464, Golden, Colorado 80402-0464

**B707-A-000001**

- The project team and organization, including needed support from other State agencies and the Defense Nuclear Facility Safety Board (DNFSB), were discussed. Names were provided accordingly.
- TJ Wirth discussed the facility's background and history including the inventory of buildings and their types along with the known hazards.
- A discussion of the overall Building 707 2006 Closure Strategy, including ongoing mission activities and deactivation activities was held. The purpose of these discussions was to provide all present an overview of the activities currently going on within the facility and how they interact with Decommissioning activities. This also provided background on how the Decommissioning "Sets or Modules" were established in the facility. A current high-level 2006 schedule was provided. It was noted that Building 731 was to be added to the cluster.
- Pete Sanford presented the Decommissioning Strategy for Building 707 which included a series of slides covering the general project decommissioning scope, the Work Breakdown Structure (WBS) and how it ties into the Integrated Work Control Program (IWCP) work packages, which are the basis for the work.
- Fiscal Year (FY) 2000 Decommissioning schedule and key FY00 Decommissioning activities were discussed in detail.
- Key Project Decommissioning Strategies were proposed and discussed at length.
- A summary of the Building 707 Closure Project issues and uncertainties were summarized for the group and after a brief question and answer session, TJ Wirth adjourned the meeting. Questions and responses arising from the presentations are summarized below.

#### 4.0 QUESTIONS AND ISSUES:

- The DNFSB Products of Combustion (POC) needs to be identified. The Department of Energy (DOE) provided the POC to TJ Wirth during the meeting.
- Steve Tarlton, Colorado Department of Health and Environment (CDPHE), inquired about the status of the various Rocky Flats Cleanup Agreement (RFCA) Standard Operating Protocols (RSOP) and their relationship to the Building 707 Decommissioning Operations Plan (DOP). Pete Sanford stated that the RSOPs are still under development and, depending on the timing of the final approval of one or more of the RSOPs, they may be incorporated into the DOP by reference. The level of information in the DOPs versus that provided in the RSOPs will be a topic of further discussion.
- Edd Kray, CDPHE, expressed concern over the extent of the proposed Reconnaissance Level Characterization Report (RLCR) and the approach that characterization data for the ancillary buildings will not be included in the DOP. Kaiser-Hill's (K-H) response and approach is to assume that these structures will be Type 1 and if they ultimately turn out to be Type 2 then a change to the DOP or another decision document such as a RSOP will be put in place.
- TJ Wirth stressed the extremely tight schedule surrounding the development and approval cycle of the DOP. TJ discussed an option of sending Draft Chapters to the state as a way to facilitate the process. TJ mentioned that this discussion had already taken place with DOE and Edd Kray and there appears to be a warm reception to doing this. Edd and TJ will work out the details in a later meeting.

- Chris Gilbreath, CDPHE, asked if this means that Safe Sites of Colorado (SSOC) is the contractor. K-H responded that SSOC's current scope includes mission operations, facility management and deactivation. We are looking at various subcontracting options for decommissioning.
- Steve Tarlton, CDPHE, participated in a discussion of the Protected Area (PA) Closure schedule, asking how the process of clarifying the PA closure requirements was coming along, and if this work is delaying the building Decommissioning. Steve offered his support in expediting this process if we thought that the requirements that were going to be imposed by Headquarters were tending to be excessive.
- Chris Gilbreath, CDPHE, questioned the number of Size Reduction facilities planned for the building and expressed concern over any reliance on robotics since time is running out for the use of these facilities. K-H anticipates the establishment of one major Size Reduction Facility in Module G with the option of smaller less complicated systems in the 2<sup>nd</sup> floor area. In-place, Size Reduction areas will probably also be required for those gloveboxes and pieces of equipment that are too complicated or too large to be moved to G Module. A series of meetings is scheduled over the next several weeks to begin the process of coordinating K-H Size Reduction efforts with the Size Reduction Design Team with the other facilities undergoing or starting to plan size reduction activities. This meeting will allow the team members to better define and answer the size reduction questions, which effect the projects.
- Steve Tarlton expressed his support for a centralized Size Reduction Facility if K-H believes that's the best way to go.
- A discussion concerning the content of the DOP regarding the connection between the Decommissioning and Environmental Restoration activities was held. K-H was reminded to think about ER characterization issues early in the process and an example of subsurface contamination attributable to footing drain systems was cited. K-H responded that Environmental Remediation activities are scheduled to begin early in the project but that K-H will revisit if they are early enough.
- Pete Sanford, SAIC/K-H, discussed the first bullet on slide 46 which suggests an approach to remove gloveboxes from the hazardous waste category based on characterization. Chris Gilbreath, CDPHE, suggested that discussions be started with Waste Isolation Pilot Plant (WIPP) and a proposed procedure be submitted for review ASAP.
- Edd Kray, CDPHE, again questioned the scope of the RLCR and feels that all the data needed to plan the complete decommissioning and restoration work should be in hand before any work is designed. Pete Sanford stated that the current plan puts this level of characterization as part of the IWCP development program. Edd stated that this approach is not acceptable to CDPHE. Fred Gerdeman, DOE, will raise this issue within DOE and then schedule a meeting between DOE and Environmental Protection Agency (EPA). Steve Tarlton, CDPHE, indicated that an overly-detailed RLCR was not what CDPHE desired, and that the RLCR that supported the DOP would not have to be as detailed and complete if CDPHE were allowed to participate more actively in the "in process characterization" as work packages were developed.

- Judy Bruch, CDPHE, requested clarification on the second bullet on slide 48 relating to water used during decontamination and demolition activities, clarifications relating to storm water run off, subsurface plumes and the effect on the excavation during removal actions. Laurie Gregory-Frost (E2/K-H) stated that the procedures being used now at other on site locations will be implemented on this work along with the modifications required by lessons learned.
- Edd Kray, CDPHE, stated that he prefers to have the building demolition plan as part of the DOP. K-H stated that the current plan is to issue the Demolition Plan as a RSOP.
- Edd suggested that the DOP be clear as to what we know, what we don't know, and what decisions are being deferred to a later date.
- Chris Gilbreath, CDPHE, asked about the status of the C Pit or basement area after demolition is completed and was told that this area will remain, minus the equipment and associated utilities.
- Judy Bruch, CDPHE, asked how much water may be used in the high-pressure water systems and what is the plan for treatment of this water both during and after Building 374 Decommissioning. Fred Gerdeman, DOE, is working on the site treatment program to be implemented after Building 374 is decommissioned and will advise on the outcome of that effort. K-H also responded that K-H is aware that Building 374 will probably need to come down before the need for water treatment is no longer an issue.
- A suggestion was received to establish a series of working meetings to be held with the regulators to communicate progress, changes, and issues. TJ Wirth will establish this meeting schedule.

#### 5.0 ACTION ITEMS:

- |  |                              |  |
|--|------------------------------|--|
| 1. Schedule a meeting between DOE and EPA to discuss issues surrounding the characterization process and the role of the RLCR. | Actionee: Fred Gerdeman, DOE | <i>Complete<br/>(November 3, 1999)</i> |
| 2. Establish a series of working meetings to be held with the regulators to communicate progress, changes, and issues.         | Actionee: TJ Wirth           |  |
| 3. Identify the DNFSB, POC<br>Status: Complete - Don Owens is the DNFSB POC.   | Actionee: TJ Wirth           | <i>(Oct. 15, 1999)</i>                 |
| 4. K-H to re-review start date of ER activities.   | Actionee: Pete Sanford       |  |
| 5. Set up meeting to discuss removal of gloveboxes from the hazardous waste category based on characterization.                | Actionee: Pete Sanford       |  |

**Best Available Copy**

ATTENDEES:

✓ R. Brandt	SAIC/K-H	J. Lehew	Tenera/K-H
✓ J. Bruch	CDPHE	Randy Leitner	PE/K-H
✓ M. Conilogue	SSOC	C. Madore	ECS/K-H
✓ D. Fox	CDPHE	G. Nishimoto	DOE
F. Gerdeman	DOE	L. Norland	Tenera
✓ C. Gilbreath	CDPHE	J. Paynter	E2
L. Gregory-Frost	E2/K-H	L. Resler	PMTECH
J. Hale	DOE	P. Sanford	SAIC/K-H
D. Herrick	SSOC	T. Scott	PAI/TRUT
M. Heser	K-H/PE	✓ S. Tarlton	CDPHE
J. Jones	MK/RMRS	D. Ward	SSOC
✓ E. Kray	CDPHE	L. Williams	K-H

T.J. Wirth  
Project Manager  
Building 559/707 Closure Project  
Kaiser-Hill Company, L.L.C.

PS:kjs

Enclosure:  
As Stated

Distribution

Henry Dalton  
John Hale ← *Fred Gerdeman*  
Dave Hicks  
Joseph Legare  
Matthew McCormick  
Greg Nishimoto

*Add CDPHE to Dist*

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**EXTERNAL SCOPING MEETING - October 14, 1999**

[illegible]

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Reply by: \_\_\_\_\_

## CORRESPONDENCE APPROVAL ROUTE SHEET AND CONTROL SLIP (information may be handwritten)

Originator: Pete Sanford  
Department: D&D Closure Projects  
Typist: Kathleen J. Sharp  
Telephone: 303-966-2762  
Location: Bldg. 130

Letter No: TJW-007-99

Reply To: \_\_\_\_\_

Action Due Date: \_\_\_\_\_

Subject: Meeting Notes for Building 707 External Scoping Meeting held on 10-14-99

For Signature By: T.J. Wirth

Reviewed and approved by:

Route To	Department	Approved	Date
Kathy Lucero	<u>D&amp;D</u>	<u>[Signature]</u>	<u>11/3/99</u>
Pete Sanford	_____	_____	_____
T.J. Wirth	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
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Original letter

References (if any)

Attachment/Enclosure

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OCTOBER 27, 1999

TO: DISTRIBUTION

FROM: TJ WIRTH, PM, B559/707 Closure Project, B111, x4894, pager212-3488

SUBJECT: MEETING NOTES FOR BUILDING 707 EXTERNAL SCOPING MEETING HELD ON  
OCTOBER 14, 1999

ATTENDEES:

R. Brandt	SAIC/KH	J. Lehew	Tenera/KH
J. Bruch	CDPHE	C. Madore	ECS/KH
M. Coniloque	SSOC	G. Nishimoto	DOE
D. Fox	CDPHE	L. Norland	Tenera
F. Gerdeman	DOE	J. Paynter	E2
C. Gilbreath	CDPHE	L. Resler	PMTECH
L. Gregory-Frost	E2/KH	P. Sanford	SAIC/KH
J. Hale	DOE	T. Scott	PAI/TRUT
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- NEXT STEPS TJ Wirth



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Distribution

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Distribution

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Badgett, Sam

Bradford, Jeff

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Mark; Holifield, Al; Jones, John; Kennedy, Colburn; Lamb, Frank; Law, John; Lehw, John; Leitner,  
Randy; Lewis, Mark; Madore, Catherine; ; Nesta, Stephen; Norman, Rich; Patnoe, Carol; Paynter, Jeff;  
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Smith, Bradley; ; Swenson, Peter; VanMeighem, Jeff; Walton, Brian; ; Dalton, Hank; Hale, John; Hicks,  
Dave; Kray, Edd; Mark Aguilar (EPA); McCormick, Matthew; Nishimoto, Gregg

Cc: Timothy Rehder, EPA

??? Gunderson CDR

Joseph Legare DDE

David Shelton KH

Fulton, John;

Ferrera, Kenneth

Wirth, TJ

Mathis, Brian

Stevens, Jeffrey

Copies

Administrative Record with attachments

# BUILDING 707 - CLOSURE PROJECT

## EXTERNAL SCOPING MEETING - October 14, 1999

NAME	COMPANY	PHONE	PAGER	FAX	BLDG
ROBERT BRANDT	SACC	6A 6037			130 -
JOHN LETHEW	TEKRA/KH	7508	212-3284	5535	111
EDD KRAY	CDPHE	2115	280-6301	5449	T124A
DICK FOX	CDPHE	2793	990-7054	5449	T124A
MIKE CONILOGUE	SSOC	6152	212-4466	4721	371
Steve Tarlton	CDPH	692-3423			off site
Chris Gilbreath	CDPHE	692-3371		757-5355	T-124A
LONG HERRICK	SSOC	966-5470	212-5408	966-6208	705
TAM SCOTT	PAI/TALUHA	966-2093	212-5450	966-3090	130
JOHN LOWES	ME/RMS	966 4454			T873B
Fred Gerdeman	DOE	966-6203		4775	460
JOHN HALE	DOE	966-3450	-	4775	460
LEE NORLAND	TEKRA	966-5223	-	3090	130
DAVID BLARD	SSOC	966-5938	212-2578	7553	750
LES RESLER	PM TECH	966-7041		4016	T750D
TEK PRINTEN	KZ	966-8220	212-4199	4016	T750D
MARK HESER	KH/PE	966-2238	212-3603	3598	T130C
Lute Williams	KN MCDPS	966-3389	212-3287	5065	B111
Peter Sanford	SAC/K-H	966-2762	461-2363	3090	B130
GREGG NISHIMOTO	DOE	966-7022	-	2997	B460
JUDY BRUCHI	CDPHE	692-3428	-	757-5355	-
Laurie Gregory-Frost	E2/KH	966-3681	212-1980	5001	T130C
CATHERINE MADORE	ECS/K-H	3692	212-1779	5001	T130C



Kaiser♦Hill Company, L.L.C.  
Rocky Flats Environmental Technology Site  
10808 Highway 93, Unit B  
Building 130  
Golden, CO 80403-8200

## Fax Transmittal Sheet

Date: 10/18/99  
To: John Hale  
Company: DOE  
Fax: 2497  
Phone: 3450

From: Pete Sanford  
Company: K/H/SAIC  
Fax: 3090  
Phone: 2762

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

### Message:

John - TJ said you wanted the  
attendance sheet  
Pete

THIS FAX CONTAINS \_\_\_\_\_ PAGES INCLUDING COVER SHEET.  
IF YOU DO NOT RECEIVE ALL PAGES, CALL (303) 966-\_\_\_\_\_

# **B707 Closure Project 2006 Closure Strategy**

**TJ Wirth  
Kaiser-Hill, L.L.C**

**October 1999**

October 1999 TJ Wirth



**KAISER-HILL COMPANY, LLC**

# B707 CLOSURE PROJECT

## AGENDA

- **INTRODUCTION**  
– *Meeting Purpose*  
– *Project Purpose*  
TJ Wirth
- **PROJECT TEAM & ORGANIZATION**
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– *List of Cluster Buildings and Anticipate Facility Type*  
– *Known or Anticipate Facility Hazards*  
TJ Wirth  
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TJ Wirth  
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Pete Sanford  
Pete Sanford
- **PROJECT ISSUES AND UNCERTAINTIES**
- **NEXT STEPS**  
TJ Wirth  
TJ Wirth



# **B707 CLOSURE PROJECT**

## **Introduction**

### **MEETING PURPOSE**

To begin the Internal & External Scoping Process for B707 Cluster Decommissioning Closure activities.

### **PROJECT PURPOSE**

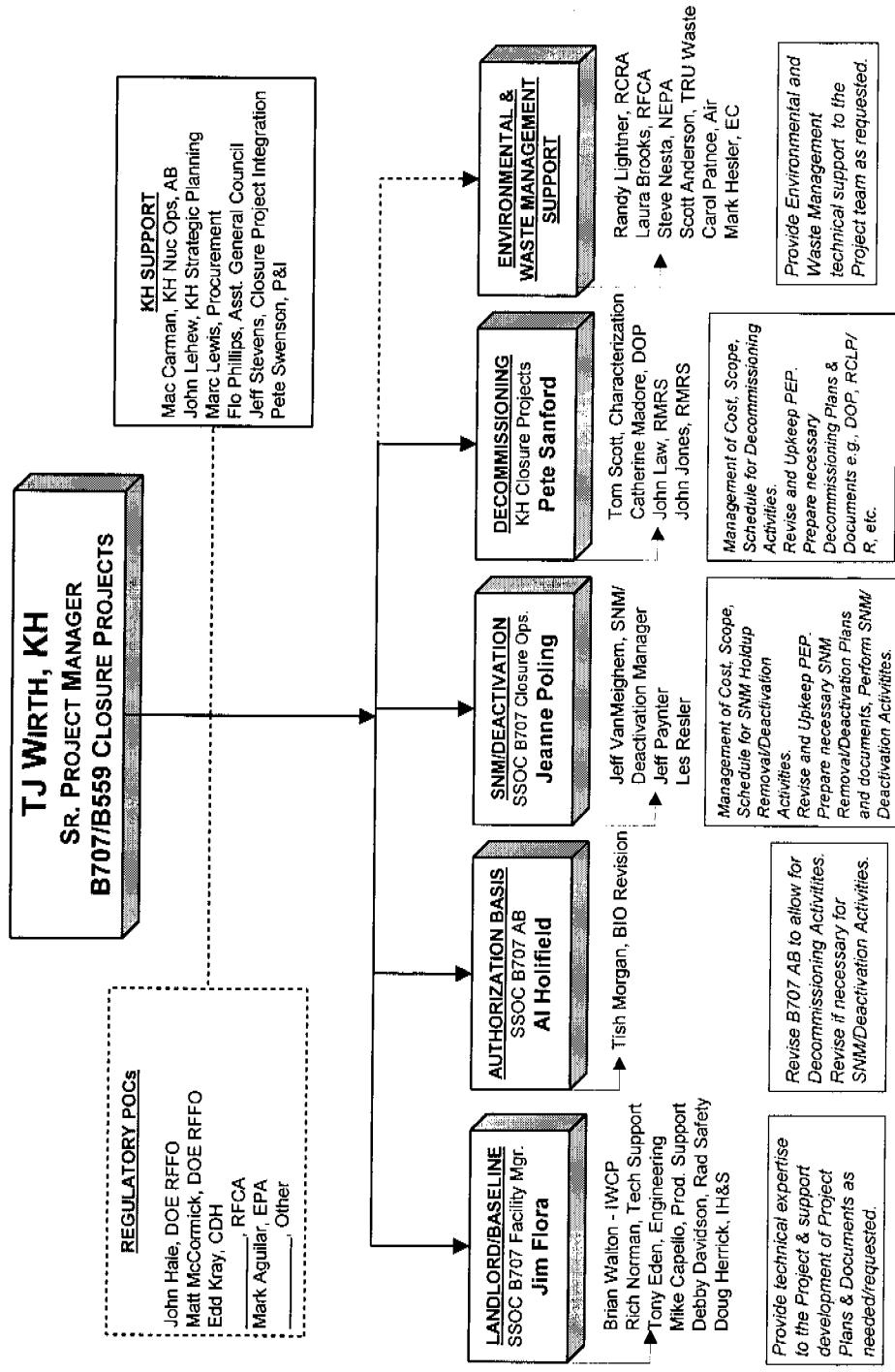
To plan and execute the clean up and closure of B707 Cluster facilities using lessons learned from previous RFETS facilities undergoing Decommissioning and in accordance with external rules and regulations and internal policies and procedures governing these activities.





# B707 CLOSURE PROJECT

## Project Team & Organization



# **B707 CLOSURE PROJECT**

## **Facility Background & History**

- Building 707 was used to perform all metallurgical and assembly processes for manufacturing plutonium components.
- Different modules located in Building 707 housed operations such as casting, rolling, forming, machining, assembly and testing of materials.
- Plutonium items were stored in vaults such as the X-Y Retriever.
- Special Nuclear Materials (SNM) were left in place without any handling or repackaging pending resumption of nuclear operations in 1989.
- Production mission was formally terminated in 1992
- Resumption efforts have been underway to complete processing, stabilizing and repackaging the SNM for storage and shipment and will continue in Building 707 through approximately 2002
- B707 contains some of the largest amount of SNM Holdup at RFETS.



# B707 CLOSURE PROJECT

## B707 Cluster Facilities & Anticipated Facility Type

707 Cluster	FACILITY**	FT2	TYPE	COMMENTS
	707, PU manufacturing building	196,930	3	Cluster is located over an IHSS
	731, process waste pit (707)	506	2	
	708, compressor building	7,460	1	172 gloveboxes in 707
	711, cooling tower	1,900		
	711A, cooling tower emergency diesel pump	2,040		
	718, service building	294		
	707T, tomographic gamma scanner system trailer	N/A		
	708S, skid-mounted breathing air compressor	N/A		
	Tank 206, carbon tetrachloride storage	N/A	1	
	Tank 208, liquid argon storage	N/A		
	Tanks 209-221, helium storage	N/A		
	Tank 223, liquid nitrogen storage	N/A		
	Tank 284, helium storage	N/A		
	Tank 290, UST diesel blend	N/A		
	Tanks 324-325, diesel storage	N/A		
	Tank TK-16, AST diesel storage	N/A		
	**list derived from the FDPM			



# **B707 CLOSURE PROJECT**

## **List of B707 IHSS & PACS**

- Part or all of the following IHSSs are within the area of this cluster:
  - 121 - Old Process Waste Lines
  - 123.1 - Valve Vault #7
  - 123.2 - Valve Vault w. of 707
  - 150.4 - Rad Site NW of B750
  - 150.5 - Radioactive Site West of Building 707
- Part or all of the following PACs are within the area of this cluster:
  - 700-1103 - Leaking Transformers
  - 700-1104 - Leaking Transformer - Building 708



# **B707 CLOSURE PROJECT**

## **Types of Known or Expected Hazards**

- **Nuclear Materials**
  - Plutonium Contamination
  - Enriched Uranium
- **Hazardous Chemicals & Materials**
  - Beryllium
  - Asbestos
  - PCBs
  - Lead



# **B707 CLOSURE PROJECT**

## **2006 Closure Strategy**

- **Critical Path for B707 Closure Is MAA Closure in FY02 Through Completion of:**
  - *Ongoing Residue Processing*
  - *SNM Holdup Removal*
  - *Classified Matter Removal*
  - *Shipping of Metal Components*
  - *Oxide Stabilization*
- **Early SNM Holdup Removal and Deactivation Facilitates Termination of Safeguards, Minimizes “Q” Clearances, and prepares the Facility for Decommissioning**
- **Key to Closure is performing Mission, SNM Holdup Removal, Deactivation, and Decommissioning in Parallel within the Facility.**



# B707 CLOSURE PROJECT

## 2006 Strategy (continued)

ACTIVITY	2006 Plan
Mission Activities (Residues)	FY01
Landlord	FY04
SNM/Hazardous Removal	FY02
Deactivation	FY02
Decommissioning	FY04
Demolition	FY05
IHSS Remediation	FY 05
Cluster Closure	FY 05



# **B707 CLOSURE PROJECT**

## **2006 Near-Term Activities (FY00/FY01)**

- **Complete Mission Risk Reduction Activities**

- Salt Residues - 7/00
- Dry Repack - 6/01
- Ash Residues - 11/00
- SNM Shipping - 9/02
- Metal Size Reduction - 6/00
- Oxide Stabilization - 6/00
- Drum Storage to Support MAA Closure (Ongoing)
- Drum Storage for Residue Processing (Ongoing)

- **Deactivation Activities begin as Mission work ends and Modules become available.**





# **B707 CLOSURE PROJECT**

## **2006 Near-Term Activities (FY00/FY01)**

- **Deactivation/SNM Removal Strategy Is:**
  - *Removal of Category I and II SNM Material and Classified Matter to Facilitate MAA Closure and Reduce Risks*
  - *Removal of Other Hazardous Material Such As Combustibles, Chemicals, Organic Liquids, etc., to Complete Deactivation and Allow Initiation of Decommissioning*
- **Initiated Deactivation/SNM Removal in FY99 to support MAA Closure in FY02.**
  - *SNM Holdup Removal in Gloveboxes, Furnaces, Lathes, and Other Miscellaneous Equipment*
  - *Liquid Organic Material*
  - *Classified Matter*
  - *Loose Equipment (equipment not physically tied into Utility systems)*



# **B707 CLOSURE PROJECT**

## **2006 Near-Term Activities (FY00/FY01)**

- **MAA Closure supports acceleration of Decommissioning activities due to;**
  - *Decrease in Safeguards and Security,*
  - *Need for Q-cleared D&D workers.*
- **Decommissioning activities can begin;**
  - *As Deactivation Activities and Removal of SNM Holdup Material is Complete*
  - *Modules become available.*



# **B707 CLOSURE PROJECT**

## **2006 Near-Term Activities (FY00/FY01)**

- Decommissioning Planning Activities Initiated in FY99
- Decommissioning Planning Activities Planned in FY00
  - *Planning and Engineering Activities*
    - IWCPs
    - Size Reduction Facility
  - *Reconnaissance Level Characterization*
  - *Decommissioning Operations Plan (DOP)*
- Physical Decommissioning Activities to begin in G Module in FY01
- Demolition Planned for FY05



# B707 CLOSURE PROJECT

## 2006 Near-Term Activities (FY00/FY01)

MODULE	FY99	FY00	FY01
Module A - 14 Areas	Salts/eU Decon	Salts/SNM	SNM/Deactivation
Module B - 11 Areas	SNM	SNM/Deactivation	Deactivation/Decommissioning
Module C - 8 Areas	SNM	SNM/Deactivation	Deactivation/Decommissioning
Module D - Misc Area	Dry Mission	Dry Mission/SNM	Dry/SNM/Deactivation
Module E - 8 Areas	Ash Mission	Ash/SNM Holdup	Ash/SNM/Deactivation
Module F - Misc Area	Deactivation	SNM/Deactivation	Deactivation
Module G - Misc Area	SNM/Deactivation	SNM/Deactivation	Decommissioning
Module H - Misc Area	SNM/Deactivation	SNM/Deactivation	Decommissioning
Module J - 8 Areas	Therm. Stab.	Therm/SNM	SNM/Deactivation
Module K - 7 Areas	Dry & Size Reduction	Size/SNM	SNM/Deactivation
J/K Centerline - 15 Areas	Size Reduction/SNM	SNM	SNM/Deactivation
X/Y Retriever - 1 Area	Size Reduction/Shipping	Size/SNM	SNM
Classified Matter Rem.	X	X	X
Cold Office Spaces			Deactivation
Raschig Ring Removal	X	X	X
1 <sup>st</sup> Floor Corridors			Deactivation
Miscellaneous	SNM/Deactivation	SNM/Deact/Decom	Deact/Decommissioning
(D, F, G, H, 2 <sup>nd</sup> Floor, CA Rooms) 13+ Areas (9 for D, F, G, H and 4 for 2 <sup>nd</sup> Floor, Unknown for CA Rooms)			

# B707 CLOSURE PROJECT

## 2006 Module Closure Activities per FY

	FY99	FY00	FY01	FY02	FY03	FY04	FY05
Landlord	X	X	X	X	X	X	
SNM Holdup Removal	Modules G, H	Modules A, B, C, F, G, H, J, K, JK	Modules A, B, C, D, E, F, J, K, JK	Modules B, C, D, E, J, K,			
		Centerline, 2 <sup>ND</sup> Floor, CA Rooms	Centerline, XY Retriever, CA Rooms, Corridors				
Close MAA				Mar 02			
Deactivation	Modules G, H	Modules G, H	Modules A, B, C, F, CA Rooms, 2 <sup>nd</sup> Floor	Modules A, B, C, D, E, F, G, H, J, K, Cold Offices, Classified Matter			
Decommissioning			Modules A, G, H	Modules B, C, D	Modules E, J, K, 2 <sup>ND</sup> Floor, CA Rooms, Cold Offices		
Demolition						Feb 05	
IHSS/Closure							Aug 05



# **BUILDING 707 CLOSURE PROJECT 2006 CLOSURE STRATEGY FOR DECOMMISSIONING**

**Peter Sanford  
Kaiser-Hill, L.L.C**

**October 1999**



# **BUILDING 707 DECOMMISSIONING TOPICS**

- **General Project Decommissioning Scope**
- **WBS**
- **FY00 Schedule**
- **Key FY00 Activities**
- **Project Decommissioning Strategies**



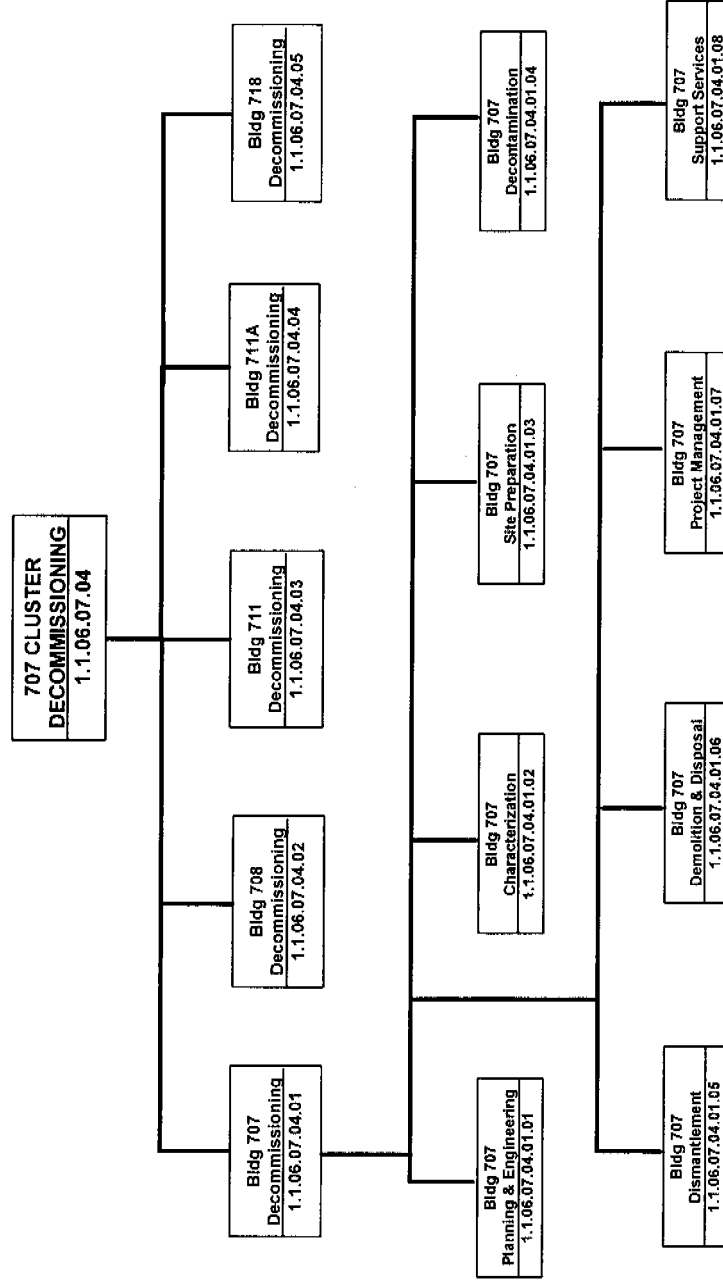
## **BUILDING 707 DECOMMISSIONING GENERAL PROJECT DECOMMISSIONING SCOPE**

- Dismantlement of contaminated gloveboxes, duct, and process equipment
- Significant holdup removal from equipment and ducts
- Decontamination of structure and fixed equipment
- Demolition of the facility and the removal of the slab
- Interface with deactivation and environmental restoration





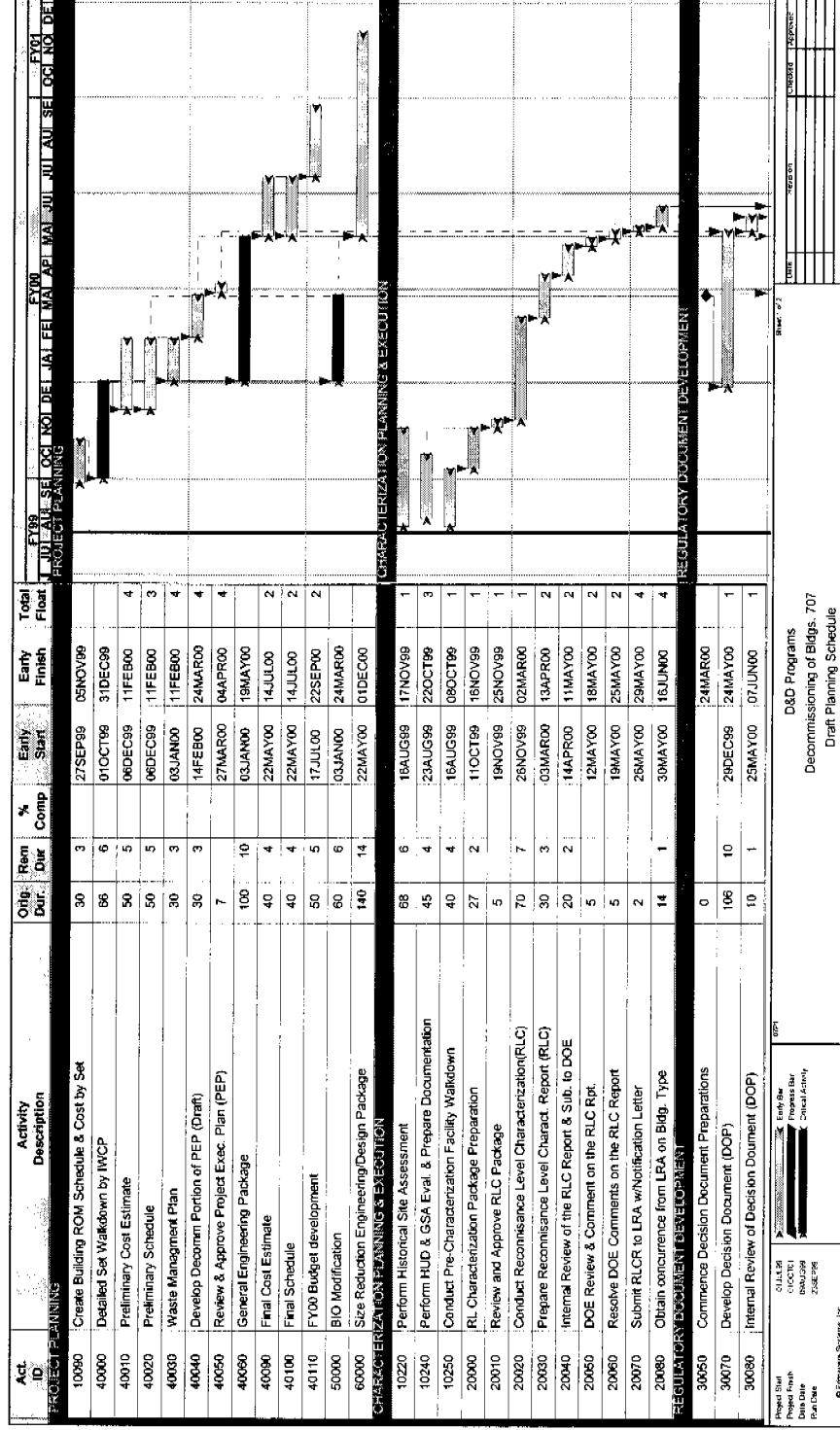
# BUILDING 707 DECOMMISSIONING TOP-LEVEL WBS DIAGRAM (LEVEL 6/7/8)



## 34



# BUILDING 707 DECOMMISSIONING FY00 SCHEDULE



# BUILDING 707 DECOMMISSIONING FY00 SCHEDULE

Act. ID	Activity Description	Orig. Dur.	Rem Dur.	% Comp	Early Start	Early Finish	Total Float	FY00												FY01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Project Start 01/11/99	Project Finish 01/31/01	Project Bar 09/01/99	Project Bar 23SEP99
Date Code 09/01/99	Rev Code 23SEP99	© Primavera Systems, Inc.	
D&D Programs Decommissioning of Bldgs. 707 Draft Planning Schedule			
Sheet 1 of 2			
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# **BUILDING 707 DECOMMISSIONING KEY FY 00 ACTIVITIES**

- **FACILITY CHARACTERIZATION**
- **PROJECT PLANNING**
  - Facility Walkdowns
  - Cost & Schedule Estimates
  - Key Plans
  - Engineering
- **PROJECT EXECUTION PLANNING**
  - Work Control
  - Activity Authorizations
  - Procurement
  - Personnel Resources



# **BUILDING 707 DECOMMISSIONING KEY FY00 ACTIVITIES**

## **FACILITY CHARACTERIZATION**

- **Complete Scoping/Historical Site Assessment**
  - Evaluate data through DQO process - Assess data gaps and the need for additional characterization - Completed 1QFY00
- **Reconnaissance Level Characterization Package**
  - Purpose: Defines details for facility characterization to implement the requirements in the D&D Characterization Protocols - Completed 2QFY00
- **Reconnaissance Level Characterization Report**
  - Purpose: Prepared and issued to DOE and CDPHE to confirm facility classification-issued 3QFY00
  - Customer: LRA



# **BUILDING 707 DECOMMISSIONING KEY FY00 ACTIVITIES**

## **FACILITY WALKDOWNS**

- **Walkdowns**
  - **Purpose:** Develop detailed data on activities by IWCP package, including take-offs, task methods, crew composition, etc. - Walkdown of the facility to support the RLC Plan & Report
  - **Deliverables:** Detailed file (hard-copy and powertool) on each IWCP/area with takeoffs, subtasks, etc. - Recon Plan and Report to support the DOP
  - **Customer:** Internal



# **BUILDING 707 DECOMMISSIONING KEY FY00 ACTIVITIES**

## **COST & SCHEDULE**

- **Cost Estimate**
  - **Purpose:** Develop a bottoms-up cost estimate based on power tool data; identify activities, take-offs, roll-up by WBS, external costs, resources, and scope
  - **Deliverables:** Validatable cost estimate
  - **Customer:** Internal
- **Schedule**
  - **Purpose:** Develop a bottoms-up schedule by sub-IWCP activity, identify resources, logic, and links with other building and site activities
  - **Deliverables:** Resource-loaded schedule, list of activities, external and internal project drivers
  - **Customer:** Internal





# **BUILDING 707 DECOMMISSIONING KEY FY00 ACTIVITIES**

## **KEY PLANS**

- **PROJECT EXECUTION PLAN (DECOMMISSIONING UPDATE)**
  - Purpose: Consolidate scope, cost, schedule, strategy, organization, staffing, and programmatic interface data; identifies any holes in project planning
  - Deliverables: Draft PEP/update to project PEP
  - Customer: Internal
- **DECOMMISSIONING OPERATIONS PLAN**
  - Purpose: Develop project information package for LRA approval, collaborative process with regulators and DOE, interactions with management and Site programs, meet requirements of RFCA
  - Deliverables: Draft DOP
  - Customer: LRA



# **BUILDING 707 DECOMMISSIONING KEY FY00 ACTIVITIES**

## **KEY PLANS (Continued)**

- **WASTE MANAGEMENT PLAN**
  - Purpose: Develop detailed bottoms-up estimates, and approaches to deal with difficult-to-manage wastes
  - Deliverables: Completed draft WMP
  - Customer: Internal (part of the PEP, provided to DOE and regulators for information only)



# **BUILDING 707 DECOMMISSIONING KEY FY00 ACTIVITIES**

## **ENGINEERING**

### **• GENERAL ENGINEERING PACKAGE**

- Purpose: Develop technical basis for IWCP package development and BIO revision - Identify systems and sequences and engineering controls
- Deliverables: Completed Engineering Package for building

### **• SIZE REDUCTION ENGINEERING**

- Purpose: Conceptual, Title I, and Title II Design for building-specific size reduction facility, including facility modification, procurement of equipment, development of requirements, interface with other size reduction efforts, etc.
- Deliverables: Engineering design, IWCP facility modification packages, procurement packages, test plans, etc.



# **BUILDING 707 DECOMMISSIONING KEY FY00 ACTIVITIES**

## **ACTIVITY AUTHORIZATION**

- **AUTHORIZATION BASIS MODIFICATIONS**
  - Purpose: Provide technical support to SSOC in their development of the modification of the 707 BLO to cover the decommissioning work covered under stripout and decontamination - Coordinate with other D&D projects and RMRS organizations
  - Deliverables: Description of decommissioning activities, information on methods and techniques, analysis of issues with other BLOs, and modification of techniques to support BLO requirements
  - Customer: DOE



# **BUILDING 707 DECOMMISSIONING KEY FY00 ACTIVITIES**

## **ACTIVITY AUTHORIZATION (Continued)**

- **MANAGEMENT REVIEW**
  - **Purpose:** Complete evaluation of project readiness to proceed, disposition of CARs, development of review plan, etc.
  - **Deliverables:** Approval to proceed
  - **Customer:** Internal (DOE/Regulatory participation as observers)



# **BUILDING 707 DECOMMISSIONING KEY FY00 ACTIVITIES**

## **WORK CONTROL**

### **• IWCP PRECURSORS**

- Purpose: Procurement of planning staff, validation of activities, extension of general engineering package, walkdowns of areas, coordination with deactivation, identification of interfacing activities, definition of EOs, etc.
- Deliverables: Infrastructure capable of beginning IWCP development

### **• IWCP DEVELOPMENT**

- Purpose: Final detailed planning to support work, management reviews, IWCP screening, criticality safety reviews, RWP preparation, etc.
- Deliverables: Completed IWCPs including safety screen, training data, etc.



# **BUILDING 707 DECOMMISSIONING KEY FY00 ACTIVITIES**

## **PROCUREMENT**

- **Equipment/Supplies/Services Procurement**
  - **Purpose:** All identification of materials, development of specifications and procurement packages, reviews and audits of suppliers, reviews of proposals, project warehousing and transportation costs, equipment/supplies costs, etc. (not including normal time for procurement personnel)
  - **Deliverables:** Procurement plans, procurement packages, review reports, material and equipment ready for use



# **BUILDING 707 DECOMMISSIONING KEY FY00 ACTIVITIES**

## **PERSONNEL RESOURCES**

### **• STAFF ACQUISITION AND TRAINING**

- Purpose: Activities involved with identifying and getting D&D workers in place, including training, worker time to get clearances, mask fits, and some down time based on scheduling inefficiencies.

It is intended that staff be partially or completely Q-cleared and that the staff will be managed to avoid significant periods of down-time by scheduling site preparation work and integration with building deactivation or other decommissioning projects

Utilize on-site resources where possible; new hires for positions not filled from residue activity phaseout, other D&D projects, etc.

- Deliverables: Staffing plans, training requirements, D&D work team ready to start





# **BUILDING 707 DECOMMISSIONING STRATEGIES – TOPICS COVERED**

- **Activity Prioritization Strategy**
- **Dismantlement/Size Reduction Strategy**
- **Regulatory Strategy**
- **Ventilation Strategy**
- **Waste Management Strategy**
- **Structural Decontamination and Demolition Strategy**
- **Authorization Basis Strategy**
- **Utility Shutdown Strategy**
- **Staffing Strategy**



# **BUILDING 707 DECOMMISSIONING STRATEGIES - GENERAL**

**Purpose: Communication**

**Consultative Process – We need your input**

**Strategy Document Format**

- **Proposed Approach**
- **Issues**
- **Alternatives**
- **Impacts/Follow-on Activities**



# **ACTIVITY PRIORITIZATION STRATEGY**

## **PROPOSED APPROACH**

**IWCP packages sub-elements of Sets based on logical grouping of work individually prioritized as part of the overall set scope some flexibility in work between sets to avoid loss of crew efficiency**

## **PRIORITY CRITERIA - FIRST FLOOR/GLOVEBOX AREAS**

- **Completion of Mission/Deactivation activities**
- **Emphasize activities near the critical path for PA closure; remove equipment containing SNM in quantities above the Site's PA closure criteria (TBD)**
- **Begin stripout in G Module (or alternative) for size reduction facilities and staging**



# ACTIVITY PRIORITIZATION STRATEGY

## PROPOSED APPROACH (Continued)

- Within a module, the order of stripout will be:
  - Remove less-contaminated equipment in module to allow for access and isolation of adjacent Zone I equipment
  - Remove as many “transportable” gloveboxes as possible to central size reduction
  - Size reduce large or heavy gloveboxes (“gloveboxes built around equipment”) in place
  - Remove above grade pipe and duct with man-lifts



# **ACTIVITY PRIORITIZATION STRATEGY**

## **PROPOSED APPROACH (Continued)**

- Zone 1 ventilation systems will be removed towards the plenums, in the direction of airflow
- Activity float in the project critical path schedule will be considered
- Worker training may require the early size reduction of less-contaminated equipment
- Resource limitations, and space and equipment constraints will result in slow initiation of work in FY01 and FY02



# ACTIVITY PRIORITIZATION STRATEGY

## PRIORITY CRITERIA - SECOND FLOOR

- Operation/Deactivation – decommissioning cannot begin in an area while a SNM or Residue operation is occurring in or is supported by that area/equipment
- Activities near the critical path for PA closure will be emphasized
- FY03 activities will focus on minimizing the project critical path in FY04
- Elevator logistics/alternative rigging/lifting plans will be considered in planning/prioritization



# **DISMANTLEMENT/ SIZE REDUCTION STRATEGY**

## **PROPOSED APPROACH**

- Use a central, building-specific size reduction facility located in G Module Gloveboxes awaiting size reduction will have internal contamination fixed, be plastic-wrapped and stored in Zone II or III
- Use the central size reduction for as many gloveboxes as possible; ducting where possible - Coordinate with Building 776 size reduction
- Gloveboxes size reduced in place will use engineered ventilation control as much as possible (birdcages)
- Use robots in the central size reduction area and use plasma arc cutting



# DISMANTLEMENT/ SIZE REDUCTION STRATEGY

## PROPOSED APPROACH (Continued)

- Decontamination or fixing of contamination will be performed as necessary to provide as safe an environment as possible for nuclear workers (contamination control) and for protection of the environment (within the building AB)
- Decontamination and volume reduction will be more aggressive than in Building 779 -lower waste generation
- Gloveboxes that are identified as expected to be low-level, or those expected to be able to be decontaminated to low-level, will be cleaned (if necessary), and then size reduced in-place only as necessary to be efficiently disposed of under the surface Contaminated Object provision





# DISMANTLEMENT/ SIZE REDUCTION STRATEGY

## PROPOSED APPROACH (Continued)

- Attempt to aggressively disassemble the large glovebox internal equipment, for those gloveboxes to be size reduced in place, before the Zone I boundary is broken - This will remove holdup as soon as possible and make the final size reduction easier - Stripping away the glovebox surface and cutting up the underlying equipment will be the last resort
- Size reduction will use PL-107 for ventilation (PL-106 as alternate)
- Second floor size reduction will be done either in-place or in a second-floor manual facility - Second floor ventilation will be considered (or reconfigured to be) Zone II for size reduction of second floor Zone I systems
- Lead will be removed from gloveboxes prior to size reduction



# REGULATORY STRATEGY

## PROPOSED APPROACH

- Develop Decommissioning Operations Plan (DOP) to cover all decommissioning activities for Building 707
- Other 707 Cluster buildings will be covered separately - IM/IRAs, RSOPs, PAMs, etc.
- Include all decommissioning wastes as CERCLA wastes except those determined to be processed as SNM and process liquids - Define building process (in DOP) for decommissioning waste handling to support the substantive requirements of RCRA
- Attempt early identification of hard-to-treat wastes to allow them to be considered under the Site Treatment Plan or other program
- Avoid use of CDDs; use the DOP sections to cover the closure of the RCRA units in the building
- Use the provisions of RSOPs as much as possible to streamline the DOP



# REGULATORY STRATEGY

## PROPOSED APPROACH (Continued)

- Develop an approach to remove gloveboxes from the “hazardous waste” category based on characterization – i.e., the waste resulting from the size reduction of a glovebox will not be mixed despite its operational history of handling carbon tetrachloride if it can be swiped-sampled, and either no carbon tetrachloride detected or detected at levels below an established trigger
- No separate environmental permits will be developed - if necessary, RFCA indicates this will be tasked to regulators
- The Reconnaissance-Level Characterization (RLC) and RLC Report will provide the basis for confirming building type



# REGULATORY STRATEGY

## PROPOSED APPROACH (Continued)

- The project will provide the necessary document to the Site Administrative Record as required by the FDPMP
- The project will ensure consultation and information exchange with regulatory staff through routine meetings
- The project will review the Sitewide ARARs document( IGD, Appendix K) and make recommendations to DOE and the regulators; separate sessions will discuss ARARs
- Principal dismantlement activities expected to result in elevated radioactivity concentrations inside Building 707, specifically process equipment size reduction, are expected to be conducted so as to exhaust into a Zone I system and, after HEPA filtration, through a stack with approved effluent monitoring



# REGULATORY STRATEGY

## PROPOSED APPROACH (Continued)

- As the dismantlement nears conclusion, the project will use point-source (stack) emission monitoring as long as feasible; when this is no longer feasible, the Site will activate portions of the existing ambient monitoring system as agreed to in the Integrated Monitoring Plan
- Water generated during decontamination will be treated as a process waste stream (i.e. through some treatment process, preferably Building 374; permitted as required). Water used as a mist to suppress dust during demolition will not be specifically collected; however, any run-off will be collected and sampled prior to discharge (this will not include stormwater run-off from the demolition area)



# VENTILATION STRATEGY

## PROPOSED APPROACH

- Keep the Zone I plenums active until the gloveboxes and duct that they service are stripped out; then remove the Zone I plenums
- Once all Zone I equipment and duct is removed from the area/rooms that they service, and those rooms/areas are decontaminated to clean/free release, remove the Zone II plenums/ducts
- Isolate individual gloveboxes in areas identified for early dismantlement (B Module and C Module), and size reduce in separate area (G Module)
- De-inert the glovebox system prior to decommissioning and operate as a once-through system – i.e., take in module Zone II air and exhaust through the normal stack after filtration



# VENTILATION STRATEGY

## PROPOSED APPROACH (Continued)

- When possible remove gloveboxes towards the plenums, in the direction of airflow
- No duct remediation – remove hold-up by removing the ducting in which it is located
- Schedule certain Kathabar air dryers and equipment for early dismantlement on second-floor; set up Module D and Module E gloveboxes for once-through operation as soon as practical
- Use plenum PL-107 (PL-106 alternate) for the size reduction facility



# WASTE MANAGEMENT STRATEGY

## PROPOSED APPROACH

- Identify hard-to-dispose of wastes rapidly to assure timely disposition pathway and compliance with applicable consent/compliance orders
- Do not decontaminate suspected TRU equipment (e.g., gloveboxes) unless there is a reasonable expectation that the reduction in the size reduction costs due to SCO packaging will offset the decontamination cost - Do not use additional means to reduce TRU volume other than reasonable packing (i.e., no additional size reduction or compaction)
- Large TRU duct will be size reduced to appropriate density
- Usually lead will be removed from gloveboxes and packaged as LLM
- SCO LLW will be direct shipped - SCO packaging will be used whenever possible





# WASTE MANAGEMENT STRATEGY

## PROPOSED APPROACH (Continued)

- Disposal of spent decontamination liquid (i.e., bulk water) will be processed through Building 374 as long as possible; further liquids will be processed through appropriate temporary treatment process
- The project waste management plan (part of the PEP) will revise the waste volume estimate, identify estimates of hard-to-dispose of wastes, and cover any specific storage or management approach for waste which is different than that provided for by the Site infrastructure - Summary elements will be included in the DOP
- Current waste projections for Building 707 are 1,071 M<sup>3</sup> TRU/M, 5,113 M<sup>3</sup> LLW, 138 M<sup>3</sup> LLM, and 2,708 tons Sanitary (not including recycle concrete to be disposed of on-Site)
- Beryllium stripout is expected to be disposed of as LLW



# STRUCTURAL DECONTAMINATION AND DEMOLITION STRATEGY

## PROPOSED APPROACH

- The X-Y retriever will be decontaminated to LLW prior to dismantlement using water
- Decontamination of modules will be using high-pressure water or carbon dioxide pellets; aggressive concrete removal will not be necessary on a routine basis
- Decontamination will be done as a continuous building activity shortly before or in conjunction with the pre-demolition survey, not as the dismantlement is complete in a given module
- Building 707 will be taken down as a clean demolition, and taken down with cables; structural pieces will be removed in pieces and stacked if possible - Dust suppression methods will be used



# STRUCTURAL DECONTAMINATION AND DEMOLITION STRATEGY

## PROPOSED APPROACH (Continued)

- The Building 707 slab will be removed as part of the decommissioning activity in conjunction with building environmental restoration efforts
- Autoclaves in Module H will be decontaminated and removed after building demolition
- Smaller cluster buildings will be removed with heavy-equipment-mounted shears, concrete pulverizers, and hoerams
- Clean concrete will be recycled on site - Clean reinforcing steel will be recycled as scrap metal



# AUTHORIZATION BASIS STRATEGY

## PROPOSED APPROACH

- The Building 707 Basis of Interim Operation (BIO) will be updated consistent with the project decommissioning activities and the approach used in Building 771
- Nuclear safety surveillances will be reduced after the removal of all Zone I ducting and conduct of building scans
- The BIO will cover cutting and torching activities as necessary for decommissioning activities while mission activities are being conducted concurrently in separate modules
- Combustible loading will be addressed on an area-by-area basis, and adjusted based on the MAR in the area/ventilation system
- Minimal USQDs will be required
- BIO adequacy will be addressed using management reviews (no readiness assessments required)



# UTILITY SHUTDOWN STRATEGY

## PROPOSED APPROACH

- The following utilities will be disconnected after deactivation of all building areas: bulk nitrogen, oxygen analyzers, ...
- The following utilities may be disconnected after Zone I completion: criticality alarms, ...
- The following utilities will be disconnected after decontamination: electrical (temporary lights), fire suppression water
- Drains will be identified and considered in all activities to prevent releases to the environment through the sanitary waste system



# **STAFFING STRATEGY**

## **PROPOSED APPROACH**

### **D&D WORKERS**

- Roll over mission and deactivation crews for decommissioning as mission activities decline
- Utilize a building-dedicated team of D&D workers (USW)
- Transfer core team from another building (771?) – 2-3 D&D workers with Q-clearances for the first building team
- Hire additional non-Q workers and/or post available slots
- Receive RCT support from the building based on long-term commitments



# **STAFFING STRATEGY**

## **PROPOSED APPROACH (Continued) PLANNING /STAFF**

- Current closure team will remain in place throughout closure to ensure consistency and reduce turnover and training, supplemented by additional expertise as necessary
- Initial core of planners from the principal subcontractor assigned the decommissioning work
- Augment from building staff as the mission work declines



# **B707 CLOSURE PROJECT**

## **Closure Project Issues & Uncertainties**

- **Ability to perform Mission, Deactivation, & Decommissioning activities in parallel within the Facility** *(due to Operational, Engineering, or AB issues)*
- **Availability & Timeliness of Hiring Additional "Q" Cleared, PSAP'd Resources to support MAA/PA Closure**
- **Prioritization of Decommissioning activities to support PA Closure**
- **Size Reduction Efficiencies**
- **Aggressive schedule for development, review, and approval of the B707 DOP**
- **Disposition Path for hard to handle wastes, e.g., TRU Organic Liquids**
- **Onsite Waste Storage**

